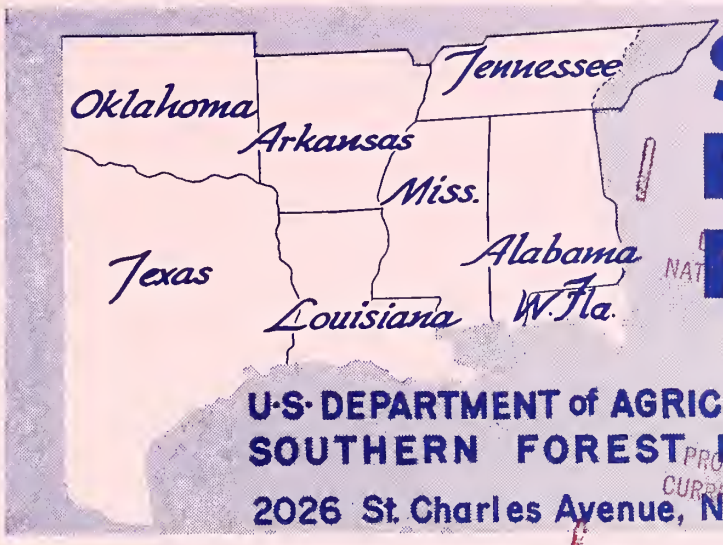

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EVERGREEN BAGWORM

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The evergreen bagworm (*Thyridopteryx ephemeraeformis* Haworth) is a defoliator of arborvitae, cedar, cypress, and other evergreen trees and shrubs of the South. Occasionally it attacks hardwoods. Although it is primarily an enemy of ornamentals, large populations can build up in forest stands of eastern and southern redcedar, and Atlantic white-cedar. Complete or repeated defoliation kills the trees, but, under endemic conditions, attacks in natural stands are mostly confined to single trees in a small outbreak area, and the bagworm is not considered one of the major forest pests.

This insect ranges from Massachusetts west as far as Kansas, and south to Florida and Texas. It flourishes in all of the southern States.

The bagworm is an oddity among forest pests--it is destructive to tree foliage, yet spends almost its entire life inside a silken bag (fig. 1). In the spring, the young larvae leave the cases that give this insect its common name. They promptly begin feeding on the nearest foliage. At this stage, the larvae are so small that they may not be noticed before they have done considerable damage.

As it begins life on its own, each larva starts to spin a case around its body. This bag, of tough, silk-like material, is enlarged as the larva grows. An opening at the top end permits the larva to extend its head and upper body for feeding, moving from place to place, and enlarging the bag as necessary. A smaller opening at the bottom of the case allows excrement to drop out. The bag, protected with bits of leaves and twigs, is carried about wherever the insect moves.

Bagworm larvae can spread over a large area in several ways: they move on the wind while suspended from silk-like threads, crawl to new areas in search of food, or are carried by a passing bird or mammal.

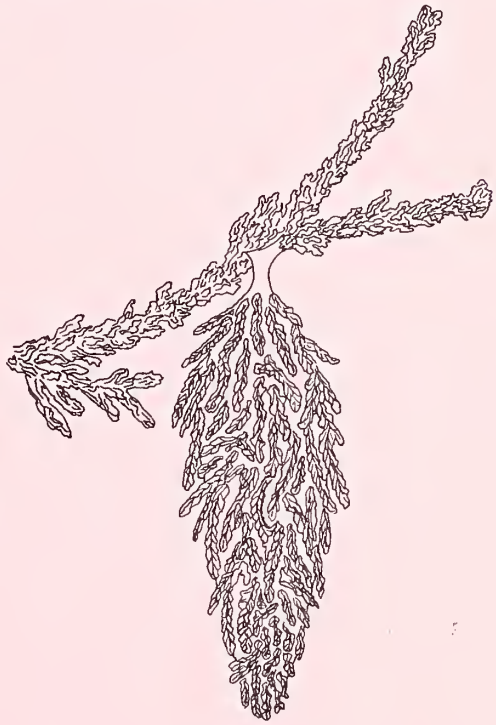

Figure 1.--*Typical bag of the evergreen bagworm (1½X).*

The larvae become full-grown (3/4 to 1 inch long) in late summer (fig. 2). They then attach their bags to twigs of the host plants with strands of silky material, and pupate.

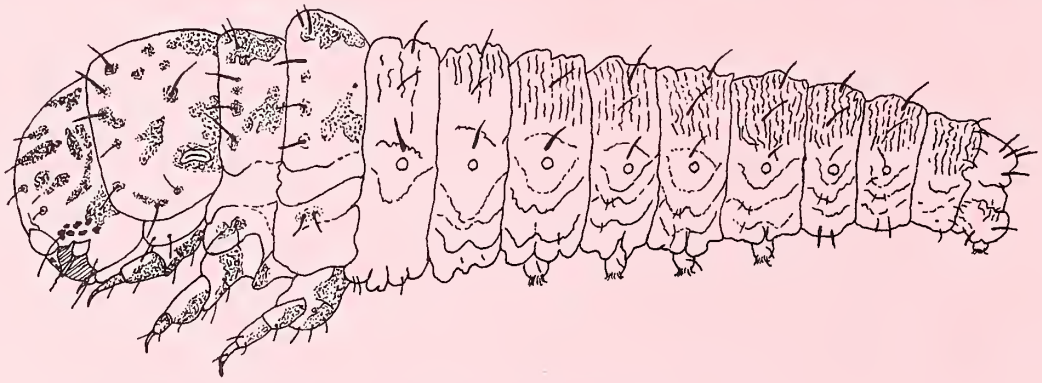

Figure 2.--*Side view of full-grown bagworm larva (5X).*

The adult phase is reached in early autumn. The males emerge as black, furry moths (fig. 3) with smoky-colored, transparent wings about 1 inch across. The females are worm-like, having no useful eyes, legs, wings, or antennae.

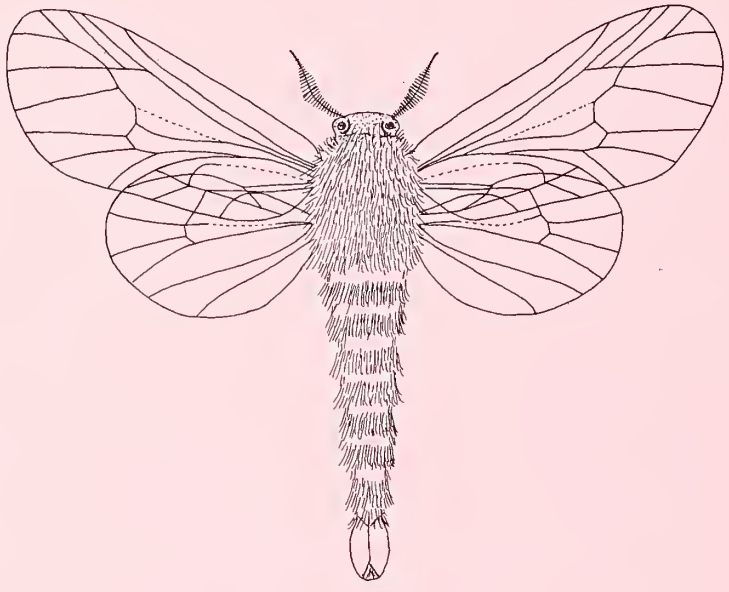

Figure 3.--*Adult male bagworm (4X).*

The male flies to the female, fertilizes her through an opening in the case, and soon dies. The female lays a mass of 500 or more eggs in the bag, emerges, closes the opening with scales from her body, drops to the ground, and dies. The well protected eggs overwinter in the case, hatching the following spring to begin the cycle again.

CONTROL

The bagworm has several natural enemies. Birds, particularly sapsuckers and woodpeckers, often tear open the bags and eat the larvae, and several hymenopterous parasites also attack the insect in the larval stage. These enemies usually keep the bagworm population at an endemic level. However, if individual ornamentals, or forest trees, are being seriously defoliated, artificial controls may be desired.

Infestations that are limited to a few small trees can be controlled by hand picking and burning the bags. Those involving large trees or wide areas can be controlled by thoroughly spraying the foliage with malathion or lead arsenate. Malathion wettable powder or emulsifiable concentrate should be mixed in water according to directions of the manufacturer. Lead arsenate should be prepared at the rate of 3 pounds to 100 gallons of water. Spraying in early spring, when larvae are small and susceptible, is most effective.

WHEN USING EITHER OF THESE POISONOUS SPRAYS, FOLLOW CAREFULLY THE SAFETY INSTRUCTIONS ON THE CONTAINER.